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June 17, 1999

VIA FEDERAL EXPRESS

Ms. Magalie Roman Salas
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: CC Docket No. 94-102
Aerial Communications, Inc. Comments
On Wireless E911 Phase II Requirements

Dear Ms. Salas:

Enclosed for filing on behalf of Aerial Communications, Inc., and its broadband PCS license holding subsidiaries, APT Columbus, Inc., APT Kansas City, Inc., APT Minneapolis, Inc., APT Houston, Inc., APT Tampa/Orlando, Inc., and APT Pittsburgh Limited Partnership, is an original and ten copies of Comments in the above-captioned proceeding. These Comments were also filed electronically with the Commission today.

Please date stamp the additional cover page marked "Copy" and return using the enclosed self-addressed-stamped envelope. You may direct any questions regarding this filing to Latrice Kirkland, Head of Industry Relations, Aerial Communications, Inc.

Sincerely,

Latrice Kirkland, Esq.

Cc: Brian O'Connor, Esq.
George Wheeler, Esq.

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FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Revision of the Commission's Rules	)	CC Docket No. 94-102
To Ensure Compatibility with	)	
Enhanced 911 Emergency	)	
Calling Systems	)	
	)	

To: The Wireless Telecommunications Bureau

Aerial Communications, Inc. Comments on Wireless E911 Phase II Automatic Location Identification Requirements

Aerial Communications, Inc., on behalf of its subsidiaries APT Houston, Inc., APT Tampa/Orlando, Inc., APT Minneapolis, Inc., APT Columbus, Inc., APT Kansas City, Inc., and APT Pittsburgh Limited Partnership (collectively "Aerial"), all of which are licensees of broadband Personal Communications Service (PCS) in the corresponding metropolitan trading areas (MTA), submit these comments in response to the Wireless Telecommunications Bureau's (WTB) Public Notice released June 1, 1999, in the captioned docket ("Notice").

In the Notice, the WTB requested targeted comment on: (1) whether to adopt standards for handset approaches similar to those outlined in proposals submitted in this proceeding by SnapTrack and APCO; (2) how specifically to handle the issues of roaming and handset turnover; and (3) whether the Commission should clarify or modify the methodology for determining ALI accuracy under Phase II. Aerial hereby responds to these issues.

Standards for Handset-Based Solutions

First and foremost, Aerial reminds the Commission that any standard that is selected for handset-based, or network-based, solutions must be technology neutral. A review of the record in this proceeding indicates that the majority of Petitioners requesting permission to use handset-based solutions for Phase II requirements are relying on GPS location technology. Aerial, however, is requesting a waiver of the Phase II requirements so that it may use a non-GPS handset-based solution that is an extension of current Global Systems for Mobile (GSM) technology. As the Commission adopts standards for handset-based solutions, Aerial specifically requests that such Commission-approved standards must be neutral allowing wireless operators operator to use either non-GPS or GPS location technology.

In the Notice, the Commission asks parties to comment on two proposals on certain specific standards proposed by SnapTrack and APCO. Aerial supports the APCO proposal that, as a condition to receiving a waiver, operators must begin to offer ALI-capable handsets no later than January 1, 2001; at least 80 percent of handsets being deployed on operators'systems must be ALI-capable as of December 31, 2001; and 100 percent of handsets being deployed on operator operators' systems must be ALI capable as of December 31, 2002.

As stated in our petition for waiver, Aerial has targeted January 1, 2001, as the introduction date of ALI-capable handsets, which is nine months before the current October 1, 2001 deadline. Once ALI-capable handsets are commercially available, full

deployment of compliant new handsets by December 31, 2002, should be easily attainable.

Aerial also supports the condition that 25 percent of all phones in use on the operator operators' systems must be ALI-capable by the end of 2002, 50 percent must be ALI-capable by the end of 2003; and 75 percent must be ALI-capable by the end of 2004. Aerial recommends, however, that the condition that 100 percent of all phones in use on operator each operator's system must be ALI-capable by the end of 2005 be modified slightly to account for customers choosing to retain non-compliant handsets. Aerial expects that, by the end of 2005, the percentage of non-ALI capable handsets in use in Aerial's PCS network will be less than 2 percent. Based on an actual experience in handset replacement, it is a fact of human nature that all customers will not respond positively to handset replacement programs. There will be a small percentage of customers who simply refuse to upgrade their handsets. For this reason, Aerial supports the condition that 100 percent of all new handsets deployed on operators' network must be ALI-capable by the end of 2005 and that operators endeavor to recall 100 percent of all non-compliant handsets.

But, in the end, it would run counter to modern regulatory policy to compel operators to turn off service to customers with non-compliant handsets. Motorcyclists ought to wear safety helmets, but there are states that refuse to mandate personal safety requirements. The Commission should refrain from imposing compliance on those few customers that chose, for whatever reasons they may have, not to exchange their handsets.

In order to ensure that 100 percent of a operator's customers have ALI capable handsets by a date certain, the Commission could mandate that operators disable non-ALI handsets so that customers may not use them. Such approach, however, would eliminate consumer choice over handset type and also obstruct public safety. Assuming that the Commission would not mandate service disruptions to ensure handset replacement, no operator can commit to 100 percent handset replacement by an arbitrary deadline. Notwithstanding customer choice, Aerial will take every reasonable effort to achieve 100 percent replacement of non-ALI handsets.

The third condition proposed by APCO is that operators must commit to a specific average accuracy level substantially better than the current Phase II requirement. Aerial believes that it is premature to commit to a specific accuracy level based on current field test results. If the Commission allows operators to use ALI-capable handsets, Aerial expects that the intelligence of handsets will improve over time to reach an accuracy level that is better that any level operators could commit to today. The eighteen-month lifecycle of handsets lends itself to the rapid evolution of better technology within handsets. Aerial, therefore, is able to commit to the continued improvement of ALI-capable handsets over time for the benefit of its customers.

Aerial agrees with the APCO proposal that operator operators must agree to implement technologies that meet industry standards for interfacing with all other operators and PSAPs. In addition, Aerial supports the standardization of ALI technology in handsets so that all handsets deployed after a certain date would be ALI-capable and thus eliminate problems associated with roaming between networks that select different technological solutions.

Aerial opposes the proposal set forth by SnapTrack, a vendor with an agenda, because it is not technology neutral. Specifically, the proposed condition that operators achieve location accuracy of 90 meters using circular error probability (CEP) methodology would force operators to use only GPS location technology. The substantiation for an accuracy level of 90 meters using CEP methodology has been provided by one vendor. To remain technology neutral, the Commission should permit operators to use location technology with specific average accuracy level substantially better than the current Phase II requirement, yet not necessarily 90 meters. This would enable operators to use alternatives to the SnapTrack solution.

Roaming Problems and Handset Turnover

The Wireless Bureau also requests additional information regarding the extent to which roamers may not have ALI-capable handsets and how operators could provide access to Phase II to roamers. Currently, the number of roamers on Aerial's GSM network is relatively small due to the number of customers using GSM technology in the United States. GSM technology is being deployed throughout the United States through PCS licensees that have launched their business only in the last few years. . Thus, the impact of handset-based ALI technology should be very minimal to roamers. As the number of roamers on Aerial's network increases, however, so too will the availability of ALI capable handsets which offsets the likelihood of a roamer not having a Phase II compliant handset.

In addition, as stated in our previously filed waiver petition, existing handset and network functionality can be utilized to provide ALI information for non-ALI capable handsets of roamers or Aerial subscribers that choose not to replace their handsets. The

existing functionality can be utilized to provide positioning that exceeds the Commission's E911 Phase I requirement; however, this functionality does not meet the current Phase II ALI requirement. Aerial believes that providing PSAPs with more than cell identity is consistent with the intended use of ALI by the PSAPs. The level of accuracy that can be provided for non-ALI capable handsets, while not to the level of the Phase II requirement, will be sufficient to allow emergency services providers to dispatch personnel immediately to the caller's vicinity while the operator obtains specific address information from the caller.

Furthermore, roamers and subscribers with non-ALI handsets would have available to them the Phase I ANI and cell identity requirements that would enable PSAPs to call the roamer back and get within a specific geographic range of the caller.

Aerial expects that, within three years from the compliance date, the percentage of non-ALI capable handsets in use in Aerial's PCS network will be less than 2 percent in the total subscriber base due to the rate of churn in the cellular and PCS industry. Churn rates, in conjunction with the relatively short lifecycles of handsets, translate into a very low number of non-ALI capable handsets in Aerial's network three years after the compliance date. The Wireless Bureau should adopt a standard that would permit wireless operators to phase in ALI-capable handsets over a five-year period.

Methodologies for Determining ALI Accuracy

Aerial agrees with other petitioners and commenters in this proceeding that the Commission should modify the methodology for determining ALI accuracy. Aerial does not believe that the Root Mean Square methodology will measure ALI accuracy in all

environments due to signal reflection, especially in urban environments. Operators should not be required to use a methodology for measuring ALI accuracy that, by its very nature, would occasionally render inaccurate measurements and, thus, causing operators to be non-compliant. To ensure a clear means of measuring accuracy, Aerial recommends that the Commission frame the ALI accuracy requirement in terms of measurable coverage and service situations.

Conclusion

Aerial urges the Commission to keep in mind that any standards that may be adopted or modification of the rules resulting from comments made in response to the Public Notice must be technology neutral to allow operators to use the most efficient, cost effective means of providing Phase II location to the public. The Commission should grant operators waivers that balance the evolution of customer safety enhancements, the PSAPs ability to cope with these advances, and the operators having appropriate timelines for the deployment of ALI technology. The Commission should be particularly wary of vendor-inspired standards and timelines. The Commission knows well the benefits of technological diversity and should set standards that foster such diversity. The non-GPS handset solution proposed by Aerial deserves to be one of the Commission-approved ALI standards.

Respectfully submitted,

Aerial Communications, Inc.

By: 

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